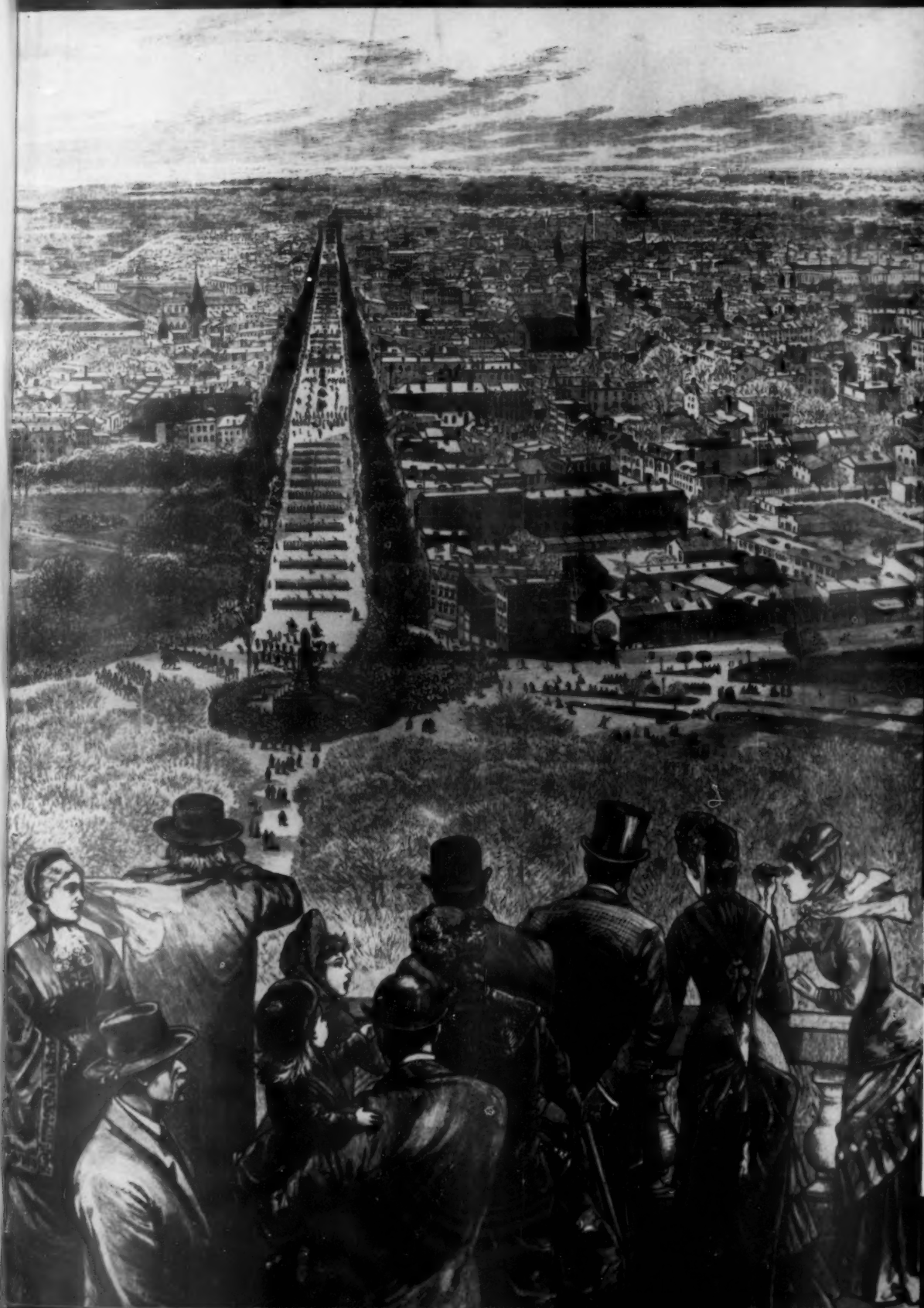


Route to

PRR



◀ Early Inaugural Parade

	Page
School Building Needs in United States . .	49
Better Health and Basic Education . . .	51
Pablo Is a Migrant	56
Engineering As a Career	60

ENERGIZING PEOPLE

by Howard G. Spalding*

RECENTLY I HAD an interesting conversation with the national sales manager of a large corporation. In it he made one remark which has significance for those of us who administer high schools. "My job," he said, "is that of energizing people."

So it is with us. Our job is that of energizing those with whom we work and directing their efforts so that they will render the best service to young people of which they are capable. The larger the group with which we work the more important and difficult this aspect of our work becomes.

Everything that we do has some degree of priority on our schedule of activities. Often the priority is determined by the urgency of the demand made upon us rather than by its true importance. We need to realize more clearly than we do that "energizing people" is entitled to a very high priority in our plans.

From what sources do professional people get the driving force which causes them to do their best work? Primarily from belief in the value of the work they are doing and from pride in doing it well.

We must, therefore, continually seek to strengthen the belief of those with whom we work in the importance of secondary education by showing them the differences that their work makes in the lives of young people.

We must try to broaden their social vision and show them how our young people, using the abilities that we have helped them to develop, are providing service and leadership in our nation and throughout the world.

In a time when success is too often measured by material standards we must help them to strengthen their conviction that the success of a professional person should be judged by what he gives, not by what he receives.

Jean Paul Richter has written of the "regal exaltation with which men devote themselves to a cause when they believe in it." Our job, at a time when the morale of school people is under attack on many fronts, is to provide the inspiration which will generate a devotion to the tasks of education in all of those with whom we work. This is the most important part of our important job, for if that is accomplished, all other results we seek will inevitably follow.

*Mr. Spalding wrote this statement originally for those who are responsible for organization and supervision in large high schools. The information should be of interest to those in other fields of educational endeavor. Mr. Spalding is Principal of the A. B. Davis High School, Mt. Vernon, N. Y. His column, "Across the Principal's Desk" in SCHOLASTIC MAGAZINE is widely read.

**School
★ Life**

Official Journal of the Office of Education
• • • Federal Security Agency

CONTENTS for January 1953

Volume 35

Number 4

Cover photograph: Appropriate to this Presidential inauguration month is this cover photograph of an earlier Presidential inauguration parade. The view is from the Capitol as the line of march proceeds east down Pennsylvania Avenue and around Peace Monument. The President inaugurated on that occasion was James Abram Garfield—the year, 1881.—Library of Congress photograph.

<i>Energizing People</i>	Inside Front Cover
(Howard G. Spalding)	
<i>School Building Needs in the United States</i>	49
<i>2 Big Jobs—Better Health and Basic Education</i>	51
(Simon A. McNeely and Howard H. Cummings)	
<i>Status of P. L. 874 and P. L. 815</i>	53
(Earl James McGrath)	
<i>Office of Education Films and Film Services—1953</i>	54
(Seerley Reid)	
<i>Pablo Is a Migrant</i>	56
(Office of Education Committee on Migrants)	
<i>Language Teaching in the Elementary Schools</i>	59
<i>Engineering As a Career</i>	60
(Henry H. Armsby)	
<i>Toward Comparable Educational Information Through-</i> <i>out the Nation</i>	62
(Fred F. Beach)	
<i>New Books and Pamphlets</i>	64
<i>Selected Theses on Education</i>	64
<i>Educational Aids From Your Government</i>	Inside Back Cover
<i>To Expedite Your Orders for Government Publica-</i> <i>tions</i>	Back Cover

Published each month of the school year, October through June.

To order SCHOOL LIFE send your check or money order (no stamps) with your subscription request to the Superintendent of Documents, Government Printing Office, Washington 25, D. C. SCHOOL LIFE service comes to you at a subscription price of \$1.25. Yearly fee to countries in which the frank of the U. S. Government is not recognized is \$1.75. A discount of 25 percent is allowed on orders for 100 copies or more sent to one address within the United States. Printing of SCHOOL LIFE has been approved by the Director of the Bureau of the Budget. (September 19, 1952.)

OVETA CULP HOBBY..... Federal Security Administrator
EARL JAMES McGRATH..... Commissioner of Education
GEORGE KERRY SMITH..... Director, Reports and Publications Branch
JOHN H. LLOYD..... Managing Editor of SCHOOL LIFE
ARVILLA H. SINGER..... Art Editor

Address all SCHOOL LIFE inquiries to the Director, Reports and Publications Branch, Office of Education, Federal Security Agency, Washington 25, D. C.

Contents of this publication are not copyrighted, and items contained herein may be reprinted "to promote the cause of education." Citation of SCHOOL LIFE, official periodical of the U. S. Office of Education, as the source, will be appreciated.

THE OFFICE OF EDUCATION was established in 1867 "for the purpose of collecting such statistics and facts as shall show the condition and progress of education in the several States and Territories, and of diffusing such information respecting the organization and management of schools and school systems and methods of teaching, as shall aid the people of the United States in the establishment and maintenance of efficient school systems, and otherwise promote the cause of education throughout the country."

SCHOOL LIFE is indexed in Reader's Guide to Periodical Literature, and in Education Index - - - - - (Single copy price of SCHOOL LIFE—15 cents)



SCHOOL BUILDING NEEDS in the United States

ADDITIONAL floor space equal to a one-story building, 52 feet wide, extending from New York City to San Francisco, Calif., is needed adequately to house the Nation's public elementary and secondary school population," Earl James McGrath, U. S. Commissioner of Education of the Federal Security Agency, recently said.

Commissioner McGrath made this statement as he revealed results of a Nation-wide survey of school building needs and the States' abilities to provide them. At the request of the U. S. Congress this survey was conducted by the U. S. Office of Education.

"Every parent and citizen should get a graphic picture of the school building shortage," the Commissioner of Education said. For example, this study by the Federal Government and the States indicates a need now for about 708 million additional square feet of school building space for more than 9¼ million pupils in public elementary and secondary schools.

"This additional schoolhousing need, which does not provide for increased enrollment next year and succeeding years, and does not take into account future classroom replacements, approximates the total residential housing space in a city the size of Philadelphia, Pa.

"According to this survey," the Commissioner of Education pointed out, "more than 325,000 instruction rooms and related facilities are currently needed this year to relieve overcrowding and to replace obsolete facilities. The estimated cost is 10.7 billion dollars. Since only 5.8 billion dollars could be provided by the States and local school districts under current laws and methods for voting bond issues or raising funds through assessments on property, a deficit of 4.9 billion dollars stands in the way of providing adequate and safe school facilities for every boy and girl in our public schools.

"We know that public elementary and secondary school enrollment will reach new high peaks in the years immediately

ahead. The schoolhousing shortage will become more critical year by year. This Nation-wide survey definitely alerts us all to the fact that financing practices will have to be improved and new and substantial resources for public school construction will have to be tapped if deficit dollars are to be raised to cancel out the 'deficit education' created by educationally unsatisfactory and unsafe structures.

"To relieve present overcrowding alone," Commissioner McGrath said, "155,000 additional classrooms are required today. To replace obsolete facilities another 170,000 should be provided. There is a question mark as to fire safety conditions in school buildings housing approximately one-third of the Nation's public elementary and secondary school children. About 18 percent of the pupils are attending classes in schoolhouses not meeting fire safety conditions. Fifteen percent are going to schools which may or may not possibly be acceptable as to fire safety.

"The relative ability of States to finance needed school construction varies greatly according to the survey," the Commissioner of Education said. "Three States have total income payments of less than \$4,000 per pupil enrolled. Three other States showed total income payments of more than \$13,000 for each enrolled child. To provide schoolhousing currently needed, one State would have to invest 11.3 percent of its total income payments for 1 year in additional school construction. Another State on the other hand would have to divert only 2.7 percent of its total income payments for one year into school construction to provide adequate facilities."

The School Facilities Survey reporting these and other findings released by the Office of Education of the Federal Security Agency, was authorized by the 81st Congress under Public Law 815. Coordinator of survey findings at the Federal level is Ray L. Hamon, Chief, School Housing Section.

Forty-six States and territories are now participating in this

national survey which is bringing together for the first time on a Nation-wide basis information which can be used for current and long-range school building planning and construction programs. Detailed data from 37 States and territories are reported in the Second Progress Report of the School Facilities Survey.

In addition to State-by-State tables showing the cost of remodeling present schoolhouses and constructing new ones, the survey report released by the U. S. Office of Education presents other facts and figures on the Nation's school plant problem.

The Second Progress Report is illustrated with bar graphs.

Current school building design stresses functional use, comfort, safety, and adaptability. The combined skills of educational planning specialists, architects, and building engineers are required to plan, design, and maintain school plants that will provide for the child maximum protection of life and health and give the most effective educational service in return for the taxpayer's money.

Other Points Developed in the Survey

Although school construction costs have risen substantially during recent years, the increase in the cost per classroom has not equalled the increases in other costs that make up the total cost of education.

Not until 1950, when capital outlay was 17 percent of total expenditures, did the proportion spent for school construction approach the percentages of the 1920's.

★ ★ ★

A major factor in creating school plant needs is an increase in enrollments . . . These data presage a public-school enrollment of more than 31 million in 1956 and 32 million in 1958.

★ ★ ★

In recent years increasing numbers of pupils have remained in school through the secondary grades, making it necessary to provide additional facilities and to enrich existing courses and add new ones to care for their needs . . . In addition . . . several States formerly having an eleven-grade public-school system have added the twelfth year . . . Both upward and downward extensions of the public school program have created, and will continue to create, new school plant requirements.

★ ★ ★

It was not until 1950 that the annual rate of expenditures for school construction reached the average for the 1920's. By 1950 it was estimated that the national backlog of need was more than 250,000 classrooms.

The differences between high and low valuations per pupil in the local districts of a State are often in the ratio of several hundred to one. This means that some districts will be able to provide several hundred times as much money per pupil as other districts.

★ ★ ★

The total land needed for school sites in 37 States reporting was 109,643 acres, of which 70,477 acres were for new sites and 39,166 acres were for the enlargement of existing sites.

★ ★ ★

In districts enrolling fewer than 1,000 pupils, the average capital outlay need per pupil enrolled was \$434 and the deficit was \$220, or 51 percent of the need for each pupil enrolled.

★ ★ ★

The growing interest in the upward extension of the public school indicates that the space needs for post-high-school community education will be a factor of growing importance in any consideration of schoolhousing during the present decade.

★ ★ ★

As teaching methods changed to provide greater pupil participation—more learning by doing—there came a definite need for schoolroom and plant facilities to house the improved programs. Local requirements

for floor areas per pupil in classrooms have about doubled during the past 20 years.

★ ★ ★

The reorganization of school districts has led to the abandonment of many uneconomical elementary and secondary schools . . . A decrease of nearly 130,000 one-teacher schools from 1919 to 1950 and an increase in the number of pupils transported have, in part, been the result of the reorganization movement. Reorganization of school districts and the tendency to reduce the number of small-school centers have made, and will continue to make, a definite impact on the total school plant needs of the Nation . . . The most drastic reductions in the number of school districts were: Illinois from 11,955 to 3,658 in 6 years; and Missouri from 8,327 to 4,838 in 3 years. In 1951 the number of school districts per State varied from 17 in Delaware and 24 in Maryland to 6,769 in Nebraska and 6,479 in Minnesota.

★ ★ ★

In districts enrolling 25,000 or more pupils, the average capital outlay need per pupil enrolled was \$408 and the deficit was \$115, or 28 percent of the need for each pupil enrolled.

★ ★ ★

35 of the 37 States reporting did not have sufficient local resources under existing laws to meet their current capital outlay needs . . . Thousands of local school districts will be unable to finance urgently needed school construction without outside assistance.

2 BIG JOBS— Better Health and Basic Education

By Simon A. McNeely and Howard H. Cummings*

REJECTION rates of Selective Service preinduction examinations since Korea reveal persistent inadequacies in health and education among America's young men. In the United States and Territories almost four of every 10 men examined have been declared unfit for military service. In the State having the highest percentage of rejections 6 of every 10 men examined were rejected because of physical, psychological, mental, or educational reasons. Even in the State with the best showing, 2 of every 10 men examined were not considered to be sufficiently healthy or literate to serve in the Armed Forces.

The challenge of these findings to our schools was pointed up to by U. S. Commissioner of Education Earl James McGrath in the December 1952 issue of *School Life*. In his article, Commissioner McGrath presented data on Selective Service examinations State by State and called upon educators to work with other agencies and citizens in improving the health and education of our people. "All educators . . . will, I am convinced, exert their best efforts to correct these deficiencies in the knowledge that good health and basic education are necessary for the full realization of the potential of individuals and the highest possible standard of living in our society in peace and war," said Commissioner McGrath.

How do educators go about meeting this challenge? First, by recognizing that procedures for upgrading health and education require cooperation of many individuals and groups within the community. Secondly, by realizing that Selective Service statistics reflect general conditions of health and education. Efforts to utilize and expand present resources and to do now what is known to be right and important will help raise the level of general health and

literacy—of which draft rejection rates are but a symptom.

Here are some suggestions. Many communities are working hard at some of these tasks. Almost every community will want to continue to improve.

Work for Better Health

Cooperate with other local and State agencies and organizations in studying community health problems, organizing and developing health resources, and determining priorities for health improvement. (See Reference No. 11 listed below.) Suggested priorities for local consideration include:

Provision of significant experiences for learning to live healthfully in home, school, and community.

Development of better screening techniques for detecting children needing medical attention.

Development of local resources for diagnosis and treatment.

Orientation of parents and of school and

health personnel in modern concepts of mental health.

Reduction of incidence of dental caries.

Detection, diagnosis, and treatment of children with impaired hearing.

Detection, diagnosis, and treatment of children with defective vision.

Detection, diagnosis, and treatment of children with epilepsy.

Recognition of the special health problems of the community.

Provision and maintenance of adequate facilities to assure safe drinking water in schools.

Extension of nutritionally adequate and palatable school lunches which meet recommended sanitary standards.

Provision and maintenance of sufficient sanitary and convenient toilet facilities in schools.

Elimination of environmental hazards and observance of safety precautions to prevent accidents.

*Specialist for Health Instruction, Physical Education and Athletics, and Specialist for Social Sciences and Geography, respectively, of the Division of State and Local School Systems.

"The Army's position in regard to the utilization of tests for physical fitness as published by the American Association for Health, Physical Education, and Recreation, is that it welcomes with enthusiasm the cooperation of this organization in helping to prepare students for military service. . . ."

C. D. Eddleman, Major General, GSC, Deputy ACoS, G-3.

"The Department of the Navy will acquaint Commanding Officers of activities in the United States which conduct Physical Fitness Training, with the achievement standards. The Commanding Officer of those activities in the United States which conduct physical fitness training will continue to cooperate with interested local school officials, who may desire and request their assistance, to the extent local conditions, facilities, and continuing military duties permit."

W. G. Chapple, CAPT. USN.

"The physical fitness achievement standards established for the AAHPER by the Department of Defense members of the Association's Defense Mobilization Committee will be circularized to all United States Air Force bases through major field commanders. Commanders will be urged to respond to the initiative of local school authorities in any manner commensurate with their respective missions."

*Thomas W. Harris, Colonel, USAFR,
Chief, Technical Training Div., Directorate of Training.*

Provision for suitable education of children with physical handicaps.

Extend and improve programs of physical education and school-community recreation. (Reference No. 12.)

Provide facilities, personnel, and time for instruction of all children and youth in a varied developmental program of games, stunts, rhythms, and other activities.

Help young people:

To develop physical efficiency—good functional health and vitality, strength, stamina, agility, coordination, a sense of balance, ability to react quickly.

To acquire useful skills—for safety, efficiency, and enjoyment.

To act in socially useful ways—through sportsmanship, good group membership, and self-responsibility.

To seek and enjoy wholesome recreation.

Cooperate with parents, physicians, and other community agencies in providing facilities and services for correction of postural and orthopedic defects, development of good body mechanics, and adaptation of physical education programs for children and youth who are handicapped, devitalized, or temporarily below par.

Provide opportunity, on appropriate levels of maturity and physical condition, for additional participation in voluntary recreation, clubs, intramural sports, play days, sports days, and interschool athletics.

Work with others in the community to provide or improvise facilities so that as many children as possible can learn to swim well. Extend opportunities for children and youth to have the valuable experiences provided through outdoor education and school camping.

Give particular attention to the physical fitness of youth of high school graduation age and those nearing 16 years of age who are likely to "drop out" of school. (Reference No. 13.)

Help boys nearing the age of induction into the Armed Forces to prepare themselves for the rigors of military life.

Keep these youth particularly in mind in expanding services and opportunities referred to in previous recommendations.

Use all teaching opportunities to motivate youth to become physically fit. Wherever appropriate, use the *Physical Fitness Achievement Standards for Boys of High*

School Graduation Age. These standards are offered to assist in the encouragement of physical fitness among youth of high school age by serving as a guide to American youth, teachers, school officials and leaders of physical education and recreation.

The standards were developed cooperatively by educational leaders and members of the Armed Forces and were endorsed at the National Conference for Mobilization of Health Education, Physical Education and Recreation held in Washington, D. C., March 1951. Reference No. 13 describes the purposes, use and administration of the achievement standards.

These Physical Fitness Achievement Standards should be distinguished from

the physical (medical) standards of the Armed Forces. The former (achievement standards) are solely for the purpose mentioned above; they have no bearing upon a person's acceptance or nonacceptance for enlistment or induction into the Armed Forces.

The Army, Navy and Air Force encourage the efforts of school personnel to help young persons achieve the strength, stamina, agility and physical well-being demanded in such high degree of the men who defend our national interests. Excerpts of letters on this subject addressed to the Director, Military Personnel Policy Division, Office of Secretary of Defense, by responsible officers of the service branches are quoted in this article.

(Continued on page 63)

REFERENCES

OFFICE OF EDUCATION

1. **Adult Education References #3. Materials for Adult Illiterates**, both foreign and native born. Washington, D. C. August 1948. Free.
2. **Developing Life Adjustment Education in a Local School.** Bulletin to implement a program of curriculum development. Washington, D. C. Circular No. 252, rev. June 1951. 24 p. Free.
3. **Life Adjustment Education for Every Youth.** Washington, D. C., U. S. Government Printing Office. Bulletin 1951, No. 22. 108 p. 30 cents.
4. **Physical Education in the School Child's Day.** Washington, D. C., U. S. Government Printing Office. Bulletin 1950, No. 14. 94 p. 30 cents.
5. **School Life Reprint: Literacy Education.** Washington, D. C., U. S. Government Printing Office, 1952. 15 cents.
6. **Teachers Contribute to Child Health.** Washington, D. C., U. S. Government Printing Office. Bulletin 1951, No. 8, 44 p. 20 cents.
7. **The Place of Subjects in the Curriculum.** Washington, D. C., U. S. Government Printing Office. Bulletin 1949, No. 12. 15 cents.
8. **The Place of Subjects Series: How Children Learn to Read**, Bulletin 1952, No. 7; **How Children Use Arithmetic**, Bulletin 1951, No. 7; **How Children Learn to Think**, Bulletin 1951, No. 10; **How Children Learn About Human Rights**, Bulletin 1951, No. 9; **How Children and Teacher Work Together**, Bulletin 1952, No. 14. Washington, D. C., U. S. Government Printing Office. 15 cents each.
9. **Why Do Boys and Girls Drop Out of School, and What Can We Do About It?** Washington, D. C., U. S. Government Printing Office. Circular No. 269. 72 p. 35 cents.
10. **Vitalizing Secondary Education.** Washington, D. C., U. S. Government Printing Office. Bulletin 1951, No. 3. 106 p. 30 cents.
11. **Better Health for School Age Children.** Washington, D. C., Office of Education, Children's Bureau, Public Health Service. Free.

AMERICAN ASSOCIATION FOR HEALTH, PHYSICAL EDUCATION AND RECREATION

(1201 Sixteenth Street NW., Washington 6, D. C.)

12. **Physical Education—An Interpretation for Superintendents, Supervisors, Directors of Physical Education, Teachers, Parents, and Others.** Washington, D. C. 50 cents. Discount on quantity orders.
13. **Physical Fitness Achievement Standards for Youth.** Washington, D. C. *Journal*, May 1951.
14. **National Conference on Mobilization for Health Education, Physical Education and Recreation.** Washington, D. C. *Highlights*, 1951. 25 cents.
15. **Report of Mobilization Conference for Health Education, Physical Education and Recreation.** Washington, D. C. March 1951. \$1.00.

OTHER

16. **Annual Report of the Director of Selective Service, 1951.** Washington, D. C., U. S. Government Printing Office. 1952. Selective Service System.
17. **Education Materials for Adults of Low Literacy Levels.** New London, Conn. A. C. Croft Publisher (Educator's Washington Dispatch). Carnegie Corporation of New York and Office of Education, Federal Security Agency.

FEDERAL SECURITY AGENCY

Office of Education
Washington 25, D. C.

December 1, 1952.

To All Applicants Under P. L. 874 and Title II,
P. L. 815:

A large number of applicant school districts, local and State school officials, and others have requested information as to the exact status of P. L. 874 and P. L. 815 and of the appropriations available during the current fiscal year for these programs. In order to administer their school programs in the most efficient manner many school officials have asked to be informed at the earliest possible time within the budget year as to the amount of their entitlements under P. L. 874 that can be met from available appropriations, and when they may anticipate receiving payments under the act. Likewise, applicant districts are much interested in knowing at the earliest possible time whether or not they will receive allotments for construction of facilities under P. L. 815. Accordingly this statement sets forth the status of these two laws and of the appropriations available to carry them out.

Public Law 874:

A total of \$51,070,000 was appropriated for the fiscal year ending June 30, 1952. It is expected that this amount will permit payment of 100 percent of the estimated entitlements of all eligible applicants for that year. Payments of 100 percent of the entitlements are now being processed as rapidly as possible and it is expected that all payments for the 1952 fiscal year will be completed by January 1, 1953.

A total of \$40,000,000 has been appropriated and is available for P. L. 874 for the year ending June 30, 1953. The estimated entitlements for the year are now about \$63,000,000. Subsection 5 (c) of the act requires that when the funds available are insufficient to pay in full the entitlements for any given year the available funds shall be prorated among the eligible applicants. Therefore, it is necessary to prorate payments for the current fiscal year to approximately 60 percent of the amount to which each eligible district is entitled.

Subsection 5 (b) of the act requires that the Commissioner shall certify to the Secretary of the Treasury for payment the amounts due each applicant for each quarter of the fiscal year. The first payment for the 1953 fiscal year will be the amount due each applicant covering the first three quarters of the year prorated on the basis of 60 percent of the estimated entitlements. Payments will be made on this basis as

rapidly as applications can be processed after receipt in the Washington office. Payments for the final quarter of the remaining amount prorated as necessary will be made for all districts as soon after the end of the year as the exact amount of entitlements can be determined.

The 1952-53 school year is the third year P. L. 874 has been in operation. This law ends June 30, 1954, and allotments cannot be made for any school year subsequent to that date under the present provisions of the act.

Public Law 815:

This act was intended to pick up the backlog of school construction created from 1939 to July 1, 1950, by Federal activities. The law set two years from the date of passage in which school districts could make application for assistance, three years in which appropriations could be obtained, and four years in which to complete construction. June 30, 1952, was the last date for submitting applications. Therefore all computations of entitlements are made as of the school year of application, such year ending June 30, 1951, or June 30, 1952.

A total of \$146,500,000 was appropriated for this program for the 1951 and 1952 fiscal years. For the 1953 fiscal year \$195,000,000 was appropriated, making a total appropriated to date of \$341,500,000. Although this total amount is approximately \$100,000,000 less than the amount required to cover the entitlements for construction and reimbursement projects of all eligible applicants under the law, it is believed to be sufficient to permit approval of construction projects needed to provide minimum facilities for 91 percent of the unhoused children in each eligible district, considering enrollments in September 1952 in determining the number of unhoused children for priority purposes based on urgency of need. It is not possible under the provisions of the act to revise or adjust entitlements on the basis of increased enrollments occurring since June 30, 1952.

Construction projects are being processed as rapidly as necessary field reports and engineering reports are received. It is expected that all funds presently appropriated will be reserved by January 1, 1953.

It is hoped that this explanation will answer many of the questions that have arisen regarding these programs and that school officials will understand what is possible of accomplishment under the existing laws and appropriations.

Sincerely yours,

U. S. Commissioner of Education

Office of Education Films and Film Services, 1953

by Seerley Reid, Chief, Visual Education Service, Division of State and Local School Systems

To you, as school administrators, and to your directors of audio-visual education, are the following services worth while: The systematic cataloging of U. S. Government films—motion pictures and filmstrips? Release of such films for your use? Publication of a State-by-State and city-by-city list of film libraries?

These are some of the services of the U. S. Office of Education Visual Education Service. Are you using them?

Cataloging U. S. Government Films

Probably the most important development in audio-visual education during 1952 was the decision of the Library of Congress to publish 3" x 5" catalog cards for motion pictures and filmstrips. Just as such cards have for years been indispensable for books, so they are becoming indispensable for films—as an authentic source of information, a source continuously kept up-to-date with the information about films indexed and cross-indexed for all your needs, and a source available to everyone!

On the next page is a sample card for a motion picture. Note the information it gives: Title of the film, producer, date of production, releasing agent, date of public release, running time, series title, order number, content summary, and *most important* that this card should be filed not only under its title but also under "optics," "lenses," and "optical instruments."

The USOE Visual Education Service worked closely with the Library of Congress in formulating rules for cataloging films and, through a cooperative agreement with the Library and in accordance with Bureau of the Budget Circular A-21, prepares catalog copy for the motion pictures, filmstrips, and sets of slides of all agencies of the Federal Government. To date, such copy has been prepared for 3,000 such films—2,165 motion pictures and 835 filmstrips of 22 different agencies.

Are you subscribing for the film catalog cards of the Library of Congress? If not, write for information to the Card Division, Library of Congress, Washington 25, D. C.

Release and Sale of U. S. Government Films

Many, perhaps most, U. S. Government films are not produced for public educational use in this country. They are made for specialized use incident to programs of various agencies which have been authorized by Congress and for which funds have been appropriated by Congress. For example, Army and Navy training films are produced for use by military personnel, films of the Department of Agriculture for use by county agents, films of the Department of State for use overseas in the "Voice of America" programs. Yet many of these films—such as "Basic Typing Methods" or "Principles of Frequency Modulation" or "Hoover Dam" can be used in U. S. schools and colleges. Agencies producing such films cannot distribute them for public educational use in this country; they do not have such authority or responsibility. The Office of Education does.

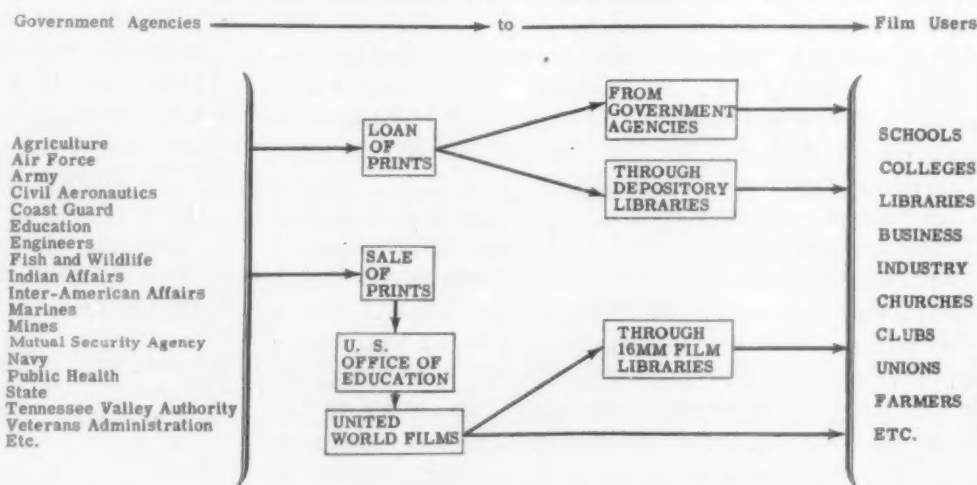
Therefore, as a service to the agencies with such films, and as a service to schools and other educational film users, the Office of Education acts as an intermediary—as a releasing agent—and places the films on sale through a Government contract, currently held by United World Films, Inc., New York. Up to the present time, more than 1,000 films not otherwise available for

public educational use in the United States have been released through the USOE Visual Education Service.

The USOE Visual Education Service also administers the contract with United World Films. This contract is awarded annually, upon a competitive bid basis, by the General Services Administration, and covers the sale of all Government films. The CSA has for several years delegated the authority to administer this contract to the Federal Security Agency, thence to the Office of Education, which, through the Visual Education Service, enforces all provisions of this contract and serves as the contact point between the Government and United World Films. Some 2,600 films of 21 different agencies are now being handled under this contract.

The diagram below explains visually the methods used by Government agencies in the distribution of their films and the place of the Office of Education in this process. Some Government agencies distribute their films directly to film users; others deposit prints in film libraries. These libraries handle their distribution to users. Some agencies release their films to the Office of Education which places them on sale through United World Films. The latter sells prints directly to film users or to film libraries. These, in turn, lend or rent prints to film users. This is, of course,

The Distribution of U. S. Government Films



an overly simplified explanation—some Government agencies use all methods—but it may help explain the distribution of Government films.

Are you receiving information about the release of U. S. Government films? If not, write to the Visual Education Service, Office of Education, Federal Security Agency, Washington 25, D. C., or to United World Films, Inc., 1445 Park Ave., New York 29, N. Y.

Introduction to optics (Motion picture) U. S. Dept. of the Navy with the cooperation of U. S. Office of Education, 1945. Produced by Bray Studios. Released for public educational use through U. S. Office of Education, 1946. 17 min., sd., b&w, 16 mm. (Optical craftsmanship series)
Order no. MN 2449-a.
Summary: Uses animation and practical examples to illustrate the principles of light waves and rays: to show how light is refracted and reflected, and to explain image formation in relation to concave and convex lenses. Studies these principles as applied to optical instruments.
— Another issue. 35 mm.
1. Optics. 2. Lenses. 3. Optical instruments. I. U. S. Navy
Dept. II. U. S. Office of Education. (Series)
681.4 FI E 52-1122
U. S. Office of Education, Visual Education Service
for Library of Congress (10)

Directory of Film Libraries

In 1948, as a service to schools and colleges and other users of educational films, the Office of Education Visual Education Service compiled and published *A Partial List of 16 mm Film Libraries*. There were 576 film libraries listed in this directory. A year later, in 1949, the Visual Education Service revised the list and published *A Directory of 897 16 mm Film Libraries*. Then in 1951 a third edition was published entitled definitively *A Directory of 2002 16 mm Film Libraries*. This guide not only listed such libraries but also described briefly the resources and services of each individual film library. The value of this directory was described by the *Saturday Review* as "the most complete and useful listing of 16 mm film libraries ever published."

A revision, for 1953 publication, is now being prepared in order to correct inevitable changes in names and addresses and also to locate and include those film libraries which, for one reason or another, were not included in the "2002" directory. In this process, the Visual Education Service of the Office of Education is cooperating with the American Library Association, Association of Chief State School Audio-Visual Officers, Department of Audio-Visual Instruction (NEA), Educational Film Library Association, and the National Audio-Visual Association.

Publication of the 1953 directory of 16 mm film libraries is scheduled for April 1953 and, as formerly, copies will be available by purchase from the Superintendent of Documents, U. S. Government Printing Office.

If you wish your film library included in this directory, write immediately to the Visual Education Service, U. S. Office of Education, Washington 25, D. C.

Other Services

These are a few of the activities and services of the Office of Education Visual Education Service—probably the most important at the present time. Other services are indicated, to some extent, by the publications listed below.

In choosing its activities and services, the USOE Visual Education Service, as part of the Federal Government, concentrates its attention upon performing services (1) which it is uniquely qualified to render, such as the cataloging of Government films; (2) which are national in character, such as the compilation of directories of film li-

braries; and (3) which are not being performed by other educational institutions or professional organizations.

It should be pointed out also that the Visual Education Service limits the scope of its activities, not only because of personnel limitations, but also because it is believed that most questions about educational films and other visual materials can best be answered and should be answered by local agencies—the audio-visual directors in State, county, and city school systems, in colleges and universities, in public libraries, in professional organizations. Last month for example, this inquiry came in: "What films should I use in my high school science class? Please send me a bibliography." Needless to say, no films were recommended. Instead, the teacher was referred to his own State department of education which has an excellent audio-visual service, to his State university which maintains a film library, and in this case to the audio-visual director in his own school system.

Current Publications of the Office of Education Visual Education Service

DIRECTORY OF 2002 16mm FILM LIBRARIES

State and city list of institutions and organizations that lend or rent 16mm films. Annotated. (1951) GPO; 30 cents

GENERAL CATALOGS OF EDUCATIONAL FILMS

Descriptive bibliography of 9 general catalogs of educational motion pictures and filmstrips. (1952) OE; free

HOW TO OBTAIN U. S. GOVERNMENT FILMS, 1952

Summary table of how to borrow, rent and purchase the motion pictures and filmstrips of 21 different agencies. (1952) OE; free

MOTION PICTURES ON THE OTHER AMERICAN REPUBLICS

Catalog of 104 films of the United States Government and the Pan American Union. (1950) GPO; 15 cents

MOVIE PROJECTORS IN PUBLIC HIGH SCHOOLS

Results of a 1949 survey of 16mm sound projectors in public high schools. Illustrated. (1950) GPO; 15 cents

3434 U. S. GOVERNMENT FILMS

Descriptive catalog of all U. S. Government motion pictures, filmstrips, and sets of slides available for public use in the United States. Contains specific instructions for borrowing, renting, and purchasing each film. (1951) GPO; 70 cents

U. S. GOVERNMENT FILMS FOR TELEVISION

Catalog of 528 U. S. Government motion pictures which have been cleared for television. (1952) OE; free

Pablo Is a Migrant



JANUARY 7, 1953.

DEAR READER: Letters sometimes get ideas over better than long drawn-out articles. We hope you will be interested in the exchange of letters between Pablo Luis Sender and the Office of Education Committee* on Migrants.

Sincerely yours,

THE COMMITTEE.

Here's Pablo's first letter:

JULY 6, 1952.

DEAR SIRs: I'm a migrant. I'm about seventeen and we move in three or four states each year to pick cotton, fruit, and vegetables. I went to school some and learned to read and write. It's hard here finding a good place to sit down to write this letter, but I've done a lot of thinking and since some of the other fellows probably weren't lucky like me to learn to write I decided to do it. What brought this up was I heard from one of the school supervisors here that you had been holding some meetings about how to help educate migrant children. Well, maybe I'm a little old to go to elementary school but I have two kid brothers and two sisters and they should be in school more. Trouble is when we move from place to place either the school isn't open or else sometimes we don't feel very welcome.

Another thing to tell the truth some of the others have parents who don't bother much to get them into school. Mine did.

Well there are a lot of troubles I could write more about. What I wanted to mention this time, like I said to the school supervisor, is why don't you tell more people about what you decided at the meetings. There is sure a lot of need to help us. Let me know what you decide to do about my letter.

Sincerely,

PABLO LUIS SENDER.

JULY 14, 1952.

Dear Pablo: Thank you for your letter. We agree with you that it is important to work on the problems connected with

*In the Elementary Schools Section of the Division of State and Local School Systems there are several persons who devote considerable time to the problem of improving educational opportunities for migrant children. "The Committee" refers to this group. Don S. Patterson is chairman of the Committee.

helping all children of migrant workers get a good education. And we did hold four conferences across the Nation this spring. We talked over the problems with State Departments of Education and others. We intend to write a summary of the highlights of those conferences to send to all the persons who were there. And if you are interested we will be glad to send you a report, too.

In the meantime, we wonder if you would be willing to write to us again. Tell us about the other problems your brothers and sisters have in trying to get good schooling. We certainly appreciate your help.

Sincerely yours,

THE COMMITTEE.

AUGUST 1, 1952.

DEAR SIRs: Well your letter was a surprise. It's just about the first time I've been asked to help out on something really important. So I've talked around with some of the others all the way from the mothers and fathers and children to our crew leader. And they gave me some good ideas to put with my own. I've made a list of them—

1. We move too soon to get settled in a school.
2. As I said before, some parents would rather have their children work than go to school.
3. Sometimes school isn't very interesting to stay in all day long.
4. If you feel sick or hungry it's not fun to go to school—or do anything.
5. In school the rooms are crowded and everyone gets in everyone's way.
6. It's not easy to talk to teachers if you don't know English very well.
7. To go to school you need better clothes and other things that cost money.
8. The teachers have trouble finding out what we know and where we have been to school. (My sister, Maria, had a card from one school but she lost it already.)
9. It's hard to catch on to what they are talking about in school when you are new.

10. Along that line we don't ever have any books or anything from school to take along with us.
11. Usually Maria (that's my sister again) has to stay home lots of days to take care of Sam. He's only two. Other kids do the same thing while their parents work.
12. There's a law about going to school instead of working during school hours if you're under 16. We get mixed up on that.
13. The places we have to live in make you want to move in a hurry sometimes.
14. Not much to do that's fun during evenings.
15. Maybe you're not interested in big people but my own dad said he wished people his age had a chance to learn things.

Well, that's quite a list. Since you have been talking about migrants at your meetings I guess you have thought of most of them.

Maybe I could have helped more by telling some of the things some of the kids liked about school once in a while. It isn't all bad. But this is enough for now.

And yes I do want a copy of your report if it isn't too much trouble.

Your friend,

PABLO.

* * * * *

DEAR PABLO: Thank you for your very interesting letter. Your list of problems really hits just about the same ones we discussed at our Regional Conferences. There were just a few additional ones and they are mentioned in the Report* which we have now completed. Since the Report is over 50 pages long it's more than you probably want to read. So we are sending you a summary of the main points about who attended the conference and what they said about solving the problems which you listed in your letter.



By the way, writing to us about good things the schools are doing is a fine idea. As a matter of fact some of the people who attended the conferences have already sent in descriptions of some good things they know about in their States. For example one community is using the public school buildings for summer school activities for migrant children. And there is a group that is planning some record forms which children might carry with them. We are expecting that the representatives will continue to write us about good practices. We want to pass the news along. That's one way we hope to be of help. Well, Pablo, if you want to read any more about our conferences take a look at the summary which we are including.

Best wishes,

THE COMMITTEE.

Summary of Regional Conferences

This is the summary of the four Regional Conferences referred to in the letter to Pablo:

Purpose of the Conferences: To analyze the problems connected with providing education for migrant children and to work out suggestions for giving sustained attention to the problems by local, State and Federal groups.



Where and When the Conferences Were Held: Washington, D. C., St. Louis, Denver, and Sacramento, in May and June 1952. These were convenient points along each of the four major migratory routes.

Who attended: Representatives from 33 State Departments of Education. Federal agencies with representatives at one or more conferences were: the Extension Service of the Department of Agriculture; Bureau of Labor Standards, Employment Security Division, and Wages and Hours Division of the Department of Labor; Bureau of Public Assistance, Children's Bureau, Federal-State Relations, Office of Education, Public Health Service, and the Social Security Administration from the Federal Security Agency; Housing and Home Finance Agency; Indian Service; and Public Housing Administration.

In addition there were representatives from several counties, State agencies and national nongovernmental organizations.

What We Talked About:

During the conferences there were many descriptions of ways the problems are being handled in various communities. Much of the discussion related to two basic questions:

1. What can be done to get migrant children into school?
2. How can educational experiences be made more profitable for migrant children?

A few of the ideas related to each question are mentioned here:

1. *What can be done to get migrant children into school?*
 - a. Attempt in every way possible to reduce the incidence of migrancy. The availability of better housing would encourage families to remain in one community. Along with this there is need for year-round employment.
 - b. Develop acceptance of migrants as members of the community. Involvement of migrants in community activities is necessary in helping them feel they are a part of the community. Publicity about some of the good things is important. Individuals and agencies in the community, including employers, should have the opportunity to cooperate in helping the community understand the mi-

*This refers to the Report on Regional Conferences on Education of Migrant Children issued by the Office of Education in September 1952.

grants, their contributions, their need for community life, and the need to educate their children.

c. Study carefully the practice of *crop vacations*. There was general opposition to the discrimination implicit in closing schools in a community to permit migrant children to work in the fields. The conferences proposed a regional study of crop vacations by schools in cooperation with growers to see to what extent such practices deprive migrant children of education and how this deprivation can be avoided.

d. Build up a greater supply of good elementary teachers. The present shortage acts to handicap the attendance of migrant children, for frequently their attendance would require extra teachers when such are not available.

e. Study ways for providing adequate school facilities and funds. The lack of building space and the lack of funds to educate transients often contribute directly to the attitude of rejection or indifference in communities. These problems need continued study in every community where there are migrants.

f. Anticipate the Arrival of School-Age Children. Here it was pointed out that Farm Employment Agency representatives usually know when and approximately how many workers are expected to arrive. With information available from them, school people can make seasonal plans with some degree of certainty.

g. Prompt reporting of the arrival and presence of school-age children in the community is important. Numerous ways were suggested to accomplish this.

h. Enforcement of School Attendance Laws. Differences in these laws from State to State seem to make evasion of school attendance an easy matter in some cases. Discussion resulted in a strong recommendation that a study be made of the compulsory school attendance laws with a view to securing legislation to eliminate the "loop holes."

i. Taking care of preschool-age children whose mothers work in the fields.

j. Day-care centers sponsored by communities, employers and private agencies were cited as ways of providing for very young children. When centers are organized within the camps, they need the help of community-service agencies to secure the health, welfare and educational helps required to make such centers satisfactory places for children. When day-care centers are available to take care of preschool children during school hours, it is not necessary for older children to stay home from school to do it.

2. How can educational experiences be made profitable for migrant children?

Three great areas of need appeared in the discussions of school programs for migrant children.

a. The need to develop in the children a sense of belonging and self-confidence.

b. The need to make education contribute to their competency in meeting situations in their daily lives.

c. The need for development of abilities and characteristics which enable them increasingly to assume the responsibilities of citizenship.

Many suggestions were made on how teachers, administrators, resident children, home-base schools and schools along the migrant routes could help meet these needs. These suggestions emphasized ways of developing skills of talking, reading and writing; skills in relating oneself to other children; skills in cooperation, respect for property, friendship, etc.

Since all of the school experiences should contribute toward helping children develop the abilities and characteristics of good citizenship, much attention was given to meeting this need. For example, stress was placed on helping children adjust to community life, learn to work and play with others, learn to make oneself an asset in one's social group, grow steadily in the skills necessary to take part in civic life. These needs are not distinctive to migrant children; they are common needs of all children. It is true, however, that situations in the lives of migrants make necessary certain experiences in school often considered unnecessary for resident children.

* * * * *

January 7, 1953.

DEAR READER: Pablo hasn't answered our last letter so we don't know whether he read the summary or not. We don't know whether you have either. In any event we would like to tell you that the Conferences made a good many recommendations not mentioned in the summary we sent Pablo. These recommendations were specifically for action by *Local School Districts, State Departments of Education, The National Council of Chief State School Officers, Professional Education Organizations, the Office of Education* and other Government agencies. Quite a few of the recommendations have already been acted on. For example, it was suggested that the NCCSSO (National Council of Chief State School Officers) develop a policy of responsibility between States for the education of migrant children. It was suggested further that the Office of Education cooperate with the NCCSSO to carry out that recommendation. The NCCSSO has already appointed a committee* to study the responsibilities of the Chief State School Officers and the State Departments of Education and to make recommendations on this problem.

Also the Interdepartmental Committee on Children and Youth called a meeting of several Government agencies recently in Washington to discuss how agencies of government can cooperate in helping solve the problems of migrants.

Just one more thing, in subsequent issues of *SCHOOL LIFE* there are going to be articles on the many specific recommendations made by the four regional conferences. Also there will be descriptions of good practices in local communities and States to improve educational opportunities for migrant children.

Sincerely yours,

THE COMMITTEE.

P. S. Don't forget that all of this is really about helping Pablo's brothers and sisters and all of their companions wherever they are. That's what counts.

*The committee of the NCCSSO consists of M. M. Craft, Illinois, chairman; C. R. Anderson, Montana; George W. Hopkins, South Carolina; and William C. Kahl, Wisconsin.

Language Teaching in the Elementary Schools

—Favorable Response to Proposal of U. S. Commissioner of Education, Earl James McGrath

PROBABLY no proposal made by Earl James McGrath, U. S. Commissioner of Education, has elicited such a Nation-wide favorable response from educators, government officials, businessmen and others as that which he made in May 1952.

At that time, addressing the 35th annual meeting of the Central States Modern Language Teachers Association in general session at St. Louis, Mo., Commissioner McGrath called for "a complete reconsideration of the place of foreign language study in American elementary education."

The Commissioner said, "The United States is, whether we like it or not, in a position of world leadership. If it is to discharge its obligations wisely and well our citizens must understand other peoples and other cultures. To gain such understanding many Americans must command a knowledge of one or more foreign languages.

"If they are to acquire these language skills, our school system must provide opportunity beginning in the early grades for many children to study other tongues," he continued. "It is in the national interest for members of the profession and laymen to unite their energies in an effort to increase the study of foreign language among our people. In doing this I firmly believe they will be making a vital contribution to the well-being of our people, to our national prosperity, and to international understanding and peace."

In news and editorial columns of the daily press, in professional journals, and in a deluge of letters from both this country and overseas, the proposal by Commissioner McGrath has been commented upon in a favorable vein.

SCHOOL LIFE in June, 1952 presented the full statement of the Commissioner on this subject. It now offers a sampling of the many writings which indicate a deep interest in the proposal nationally and internationally as a step toward good will among peoples of all nations of the world.

Selected Comments

"I have just read your article on 'Language Study and World Affairs' in the *Association of American Colleges Bulletin* and want to tell you how wholeheartedly I agree with the point of view expressed there. It seems to me that hardly anything is more important in American education than this issue of foreign language study. I have felt a hundred times that American illiteracy in regard to foreign languages is harming us in ways only a very few people understand. So it was a real pleasure to read your piece and see how you put your finger on the right reasons for language study today.

—J. GLENN GRAY, Colorado College, Department of Philosophy, Colorado Springs, Colorado, Oct. 2, 1952.

To give further consideration to the teaching of foreign languages in the Nation's elementary schools, Commissioner McGrath called leaders in education and other areas into national conference in the Office of Education January 15 and 16. A future issue of SCHOOL LIFE will report the findings of this important meeting.

"I want to tell you how much I agree with you that it would be an excellent idea to have language courses available to children of fourth grade level, and I would say, even earlier ideally. I have discovered that once a person gets really interested in learning a language, the others come relatively easily; and that he often develops a certain passion for learning languages: a language disease! . . . I do hope something develops from your idea."

—ROSEMARY BISHOP, Quaker International Seminar, Cumberland, England.

"It has been gratifying to all of us who are in the modern language field to observe

the lead which you are taking to promote the study of modern languages. Under your leadership school administrators and the general public are becoming more conscious of the international role which foreign languages must play in the world as it is composed today. One of the primary functions of education is to develop leaders in the world community, and such leadership cannot be accomplished without increased study of foreign languages."

—VINCENZO CIOFFARI, D. C. Heath and Co., Boston, Mass.

"Congratulations on that splendid subject which was reprinted in the June issue of SCHOOL LIFE. 'Language Study and World Affairs' is a subject which has long needed just the kind of treatment you gave it. I have been trying to campaign along this line myself using the *Air Age* as a spring board. If reprints of your article should be available, we could use several hundred for our language packets."

—JOHN H. FURBAY, Director, Air World Education, Trans World Airlines, Inc.

"Congratulations to you on the great insight into the problems that face us in education that prompted your address to the Modern Languages Association on the teaching of modern languages in the elementary school . . . Acquaintance with a second modern language at an early age may well serve to increase children's understanding and acceptance of other peoples and cultures."

—ROBERT R. LEEPER, Associate Editor, ASCD Publications, Association for Supervision and Curriculum Development, NEA, Washington, D. C.

—FRANCES HAMILTON, Associate Secretary, Assn. for Childhood Education International, Washington, D. C.

"With every good wish for good fortune in your splendid ground work for better international understanding."

—WALTER W. DUBREUIL, Principal, Demonstration School, Western Reserve University, Director Foreign Languages, Cleveland Public Schools.

"Those of us who are concerned with or about the education of the youth of our country, be they in the profession of teaching or in any other walk of life, owe a deep debt of gratitude to Dr. Earl J. McGrath, our Commissioner of Education, for his admirable manifesto delivered at the thirty-fifth annual meeting of the Central States Modern Language Teachers Association on May 3 at St. Louis, Mo. . . . I venture to say that under his (Dr. McGrath's) leadership and continuous interest in the matter and with the collaboration of the Modern Language Association of America and the National Federation of Modern Foreign Language Associations as well as that of the leading educators in our country, the consummation of the proposed reorganization of modern foreign language teaching and learning can be achieved within not too many years. Qui vivra verra."

—C. M. PURIN, General Chairman of the Federation's Committee on Recruitment, Training, and Placement of Modern Foreign Language Teachers, National Federation of Modern Foreign Language Teachers Association, Milwaukee 11, Wis.

" . . . you deserve great credit for the leadership which you are taking in the matter of correcting the very bad language situation in this country. I honestly believe that we are on the threshold of a new era . . ."

—THEODORE ANDERSSON, Master of Arts in Teaching, Yale University Graduate School, New Haven, Conn.

"Naturally I have read Language Study and World Affairs with very considerable enthusiasm. There is a good argument for pushing foreign languages instruction further down in the schedule, and you make it . . ."

—MORTIMER GRAVES, Administrative Secretary, American Council of Learned Societies, Member of the International Union of Academies, Washington, D. C.

Engineering As A Career

by Henry H. Armsby, Chief for Engineering Education

Division of Higher Education

THE BOY OR GIRL who hopes to make a success in engineering should have certain qualities which are not difficult to identify. Because of the current shortage of college-trained engineers, which is expected to continue for many years (see box), it is important that young people with the native ability to succeed in this vitally important profession be identified early enough in secondary school so that if they are interested in engineering they may have opportunity to secure an adequate preparation for the work of an engineering college.

The Work of the Engineer

Engineers translate scientific discoveries into practical and economical structures, machines, and processes. In a number of specialized fields they apply the mathematical and physical sciences and the principles and methods of engineering analysis and design to such functions as research, design, manufacture, construction, operation, quality control, management, sales, and teaching.¹ Their work has resulted in more new industrial developments during the last century than in all prior recorded history, and has been the major factor in the great industrial and technological development which has given the United States its present high standard of living.

Qualifications for Engineering

First, and most important, the prospective engineer must have good mental habits, the ability to concentrate, a desire for knowledge, the habit of doing well whatever he undertakes. The engineer must have the habit of thoroughness and accuracy in his work. He must finish his job, finish it right, must *know* it is right,

and he must get it right the first time. Engineers cannot blame their mistakes on others, they cannot bury their mistakes, they cannot cover them up, they don't get second chances.

Second, the engineer is a builder, a creator, not merely a mechanical builder, but a mental builder as well. He must not be content with the kind of curiosity most people feel as to *how* things work. He must have the sort of mind that constantly wants to know *why*, that seeks underlying principles instead of being satisfied with mere mechanical details. The boy who is satisfied with *how* might make a good mechanic or artisan, but only the *why* type can make a good engineer.

Third, the engineer needs initiative. He must be able to go ahead and *do* things without being told. He must be able to figure out new methods, new machines, new processes. Without initiative, no one can rise very high in the engineering profession.

Fourth, the engineer needs a good imagination. He must be able to visualize his structures and machines in action before they are built. He must be able to deal with unseen forces. A good imagination is a very important quality.

Fifth, while he need not be a mathematical wizard, the engineer should have a liking for mathematics, physics, and chemistry, and a reasonable degree of proficiency in them. These subjects form the foundation of the profession of engineering. Engineers use them in everything they do.

Sixth, the engineer must work in cooperation with others, as subordinate or superior, or both, and must therefore have those personal qualities which make it easy for him to work and play harmoniously with others.

¹ For more information consult "Engineering as a Career," published by Engineers' Council for Professional Development, 29 West 39th Street, New York, N. Y.

Preparation for an Engineering College

Engineering is based upon mathematics and the physical sciences, and an interest in, and an aptitude for, these fields is an important indicator of success in the profession. However, several studies have indicated that the general quality of high school work is a better indicator of success in college than is any particular pattern of subjects. The boy who wishes to enter an engineering school should attempt in high school to build a balanced background of general knowledge, and to make a very careful study of his individual interests and aptitudes.

Admission Requirements

Almost without exception students may enter engineering colleges directly from high school. Typical requirements for admission to engineering colleges are:

English.....	3	units.
History or Social Studies.....	1	unit.
Algebra.....	1½	units.
Plane Geometry.....	1	unit.
Solid Geometry.....	½	unit.
Science (with laboratory work).....	1	unit.
Additional work in any of above listed subjects.....	3	units.
Other high school subjects.....	4	units.

Types of Engineering Colleges

Undergraduate degrees in engineering are conferred by 192 institutions,² of which 149 are accredited in at least one field of engineering by the Engineers' Council for Professional Development,² the official accrediting agency for engineering schools. They include institutions under both public and private control, some operating as parts of universities, and others as separate schools.

Thirty-five institutions utilize the "co-operative plan" of engineering education for some or all of their students. In this plan students alternate periods in school with periods of industrial experience, in jobs which are coordinated with their educational program. This type of program in nearly all cases requires five years for completion of an undergraduate course. A few other engineering colleges require five years for the completion of an undergraduate degree, but most institutions require four years.

At least 12 engineering colleges have set up arrangements with numbers of liberal

arts colleges under which a student may attend a liberal arts college for 3 years, taking programs agreed upon between the institutions, and then attend the engineering school for 2 years. If his work is satisfactorily completed the student receives the bachelor of arts degree from the liberal arts school at the end of his fourth college year, and at the end of the fifth year the bachelor of science degree in engineering from the engineering school.

The Engineering Curriculum

Engineering colleges offer curriculums leading to degrees in more than 20 specialized fields. However, in nearly all institutions the freshman year is the same for all fields of engineering. A typical freshman year consists of English, mathematics (algebra, trigonometry, and analytical geometry), engineering drawing, chemistry or physics, surveying, shop work, and physical education or military training. Most institutions also include a special orientation course for freshmen, in which they are given information about the various fields of engineering, to help them choose the curriculum they wish to follow. Ordinarily there are only small differences between the curriculums in the sophomore year, so that a student who changes his mind at the end of the second year can still, in most instances, complete the work for his degree in the regular four-year period. Real specialization in engineering begins in the junior year and continues through the senior year.

Engineering curriculums are designed to give the prospective engineer a solid foundation in the basic sciences of mathematics, physics, and chemistry, which underly all fields of engineering, and in such fundamental engineering tool subjects as drawing, surveying, and mechanics. Sufficient humanistic social studies are included to enable the graduate to take his place as a citizen and to understand the social, moral, and political implications of his technical activities. Some study of fields of engineering related to his own specialty helps him to understand the interrelations of the different fields. And finally he studies enough of the specialized applications of basic science and general engineering to his own special field of engineering to enable him to understand the general method of attack on problems in his field, and to adapt himself to a variety of situations.

Trends in Engineering Education

There is a growing tendency in engineering schools toward less specialization, and toward more emphasis upon basic science and mathematics, and on humanistic-social studies. While it is impossible to foresee exactly what techniques will be in use by engineers 25 years from now, it is certain that these techniques will be based upon principles now available in the basic sciences. It is also safe to conclude that the problems facing engineers will continue to increase in difficulty, and will require a more and more fundamental approach.

There is a corresponding tendency in industry to be less concerned than in the past with which particular engineering curriculum a student has followed in college, so long as he has had a sound foundation in basic science and in engineering fundamentals.

The Reward

The boy who attends an engineering college will have to work, and work hard, if he is to graduate. But if he does graduate, he will have done a real piece of work, and he will receive a real reward—a trained mind, the ability to take his place among the builders of the world, to do a man's work, to contribute something constructive to the progress of civilization. Most important of all, most engineering students gain what this writer likes to call the "engineering mind,"—a mental attitude toward life which is not confined to engineers, but which has enabled engineers to succeed in practically all walks of life. By the "engineering mind," is meant the type of mind that is professional instead of commercial, that is dedicated to building instead of to profits, a mind that thinks straight and hard, that hates waste and confusion, dirt and despair, that never stoops to the adulterated, that always seeks the truth and has the courage to act in accordance with it, whether it be in designing a bridge or a peace treaty, building a motor car or a nation.

Total United States Engineers.....	1900	1950
Industrial workers per engineer.....	40,000	400,000
	255	65

Present shortage of engineers—40,000.
Average annual need for engineers—30,000.

*Prospective engineering graduates, for 1953—24,000; for 1954—19,000; for 1955—23,000; for 1956—29,000.

*Under present Selective Service policies.

² List can be secured from U. S. Office of Education.

Toward Comparable Educational Information Throughout the Nation

By Fred F. Beach, Chief, State School Systems

DURING the past year, the Office of Education and the State and territorial departments of education have initiated a project on educational records and reports which promises to have far-reaching implications. The project seeks to establish Nation-wide comparability for basic items of educational information, the absence of which is now a serious block to educational progress.

It is hard to realize that terms such as enrollment, average daily attendance, average daily membership, current expenditure, and hundreds of others that make up the everyday language of education mean different things in different parts of the Nation. For example, a local superintendent of schools in California does not mean the same thing when he talks about average daily attendance as does a superintendent of schools in Texas; nor does the Kansas superintendent of schools who is talking about enrollment have the same thing in mind as does the superintendent in Indiana. The wide variation over the Nation in the definitions of items of educational information makes it impossible to (1) compile accurate reports on the progress and condition of education in the country as a whole, and (2) make accurate comparison between local school systems located in different States or of the several State school systems themselves.

Educators and others have long recognized the need for establishing Nation-wide agreement on the meaning of terms and items of educational information which should be available, but the problems they faced in realizing this objective have never been overcome. At the outset it is important to note that no central governmental agency has the authority to establish an educational record and reporting system for the entire Nation. On the contrary, each State has the authority to establish whatever system it may wish, and local systems can make such additions as they wish. As

a consequence a wide variety of educational recording and reporting systems have grown up. Desirable uniformity may be achieved only by means of united and cooperative action of all States.

There have been three major attempts on a Nation-wide scale to achieve some degree of uniformity in reporting educational information. The first major attempt in 1909 focused attention on the growing need for comparable educational information and made progress in selecting common items. The second, which culminated in 1928, made further progress in directing attention to the types of information that should be collected. The third attempt which took place in the thirties sought to develop an over-all uniform system which would make provision for the record and reporting forms on local, State and Federal levels. Each of these major attempts focused attention on the importance of the problems and each achieved some degree of success. However, our situation today remains as before. Not one of these attempts attained the goal of common acceptance of basic items of information about our elementary and secondary education programs.

Conditions Now Favorable

The current project was begun under more favorable circumstances than any of those which preceded it. This is because we have reached the stage in the development of our State systems of education where it is both indispensable and possible to establish common definitions for items of educational information. In the first place, the National Council of Chief State School Officers has recognized the necessity for united cooperative action in establishing uniform records and reports and urged the Office of Education to undertake this project as one of its major activities. It is becoming indispensable for States to have

information which they may compare. Chief State school officers and their staffs in every State are cooperating fully in the development of the project and have given it high priority among their activities. The recent progress that State departments of education have made in professional staffing places them in a much stronger position to establish, maintain, and improve their reporting systems. The departments are also better equipped to implement the findings of the Nation-wide project.

Local school officials are also eager for the objectives of this project to be reached. They are beginning to demand uniform educational statistics which will permit them to compare their own school system with school systems in other States. The Association of School Business Officials of the United States and Canada have been particularly concerned about establishing uniformity in records and reports on a Nation-wide scale and have supported this movement from the beginning.

The Office of Education has also recognized the importance of this new project and is giving it special attention. Staff members in Research and Statistics and School Administration are devoting major portions of their time to the project. In addition, a new regular staff position, specialist in educational records and reports, has been created. Paul Reason, who has been engaged in this position, will be primarily concerned with assisting the States in improving their record and reporting systems.

Plans for the Project

Plans for the project take into account the accumulated experience which was gained from the three former National record and report projects. With this background information in mind, the current project was planned in two phases. The first phase calls for the development of a series of four handbooks which will occupy the same position with respect to educational

information as the dictionary occupies with respect to the English language. The second phase seeks to obtain common acceptance of the handbooks and their general usage by the entire profession.

Handbook number one will contain the common core of educational information, that is, the items of educational information with their definitions, that every State department of education should reasonably be expected to have available. Handbook number two will serve as the guide to sound financial accounting and reporting practices for State and local school systems. The third and fourth handbooks will be similarly concerned with personnel and property accounting and reporting respectively.

Once a handbook has been completed, the equally important second phase of the project plan calls for its incorporation into the official record and reporting system of each State and its use by all of those individuals within the State who are concerned with preparation of educational records and reports.

Progress Already Made and the Next Steps

Considerable progress has already been made since the project was started. The first handbook, which is to contain the items that will constitute the common core of educational information that all State departments should have available, is well on its way to completion. Several of the major steps have already been taken. The first step was the preparation of a tentative manuscript. This manuscript included information obtained as a result of the analysis of the State reporting forms, an analysis of the Federal reporting forms and conferences and discussions with specialists in the many fields of education involved. After a preliminary manuscript was prepared, a National conference, composed of representatives of State departments of education, colleges and universities and National organizations concerned with recording and reporting educational information, was held. These representatives met for five days and discussed the terms and definitions, item by item. The manuscript was then revised upon the basis of the recommendations obtained from this conference. The revised manuscript was called a Progress Report. Copies of the Progress Report were sent to all chief State school officers so that it could be the topic of

careful study and analysis by members of all State department of education staffs. Three months later, during the month of October 1952, a series of regional conferences of representatives of these State departments of education was held. Again the material in the progress report was subjected to careful analysis, and recommendations for improvement from each of the regional conferences were obtained. In February 1953, a second National conference, broadly representative of State departments of education, college and university professors and National organizations concerned with educational records and reports will meet to resolve the differences that have been noted at the several regional conferences, and to make final recommendations for the material to be included in the handbook. The revised document will then be presented to the National Council of Chief State School Officers for their consideration relative to its adoption, prior to its being published as the first of the four handbooks.

Former projects on records and reports lost some of their effectiveness because the results were not put into practice. Efforts to implement these former projects were sporadic as States requested assistance in revising their own systems. In this regard the current project has benefited from past experience and it includes plans for having the contents of the handbooks made a part of the official record and reporting system in each State. Plans call for familiarizing all State and local school officials who are concerned with records and reports with the material in the handbooks. State departments of education will need to design procedures especially for their own States to acquaint local superintendents of schools and others with the handbook information. The suggestions which were obtained from the chief State school officers at their National conference in Washington in December 1952 will guide the activities of the staff of the Office of Education in the assistance which they render the several States.

The experience in the project thus far is heartening. An unmistakable spirit of optimism pervades the entire activity. There is a feeling that this project will be highly successful in moving American education a long stride forward in its efforts to obtain comparable educational statistical information.

2 Big Jobs— Better Health and Basic Education

(Continued from page 52)

Work for Basic Education of All Children and Adults

Enforce the present attendance laws to see that all boys and girls of school age who should be in school are in school. Make sure that the pupil really goes to school and does not maintain a token attendance by frequent absences. Give particular attention to the needs of pupils who are potential "drop outs."

Study all slow learners to discover possible causes of retardation including deficient physical or mental health. Provide adaptive instruction and guidance to these pupils. Work to eliminate those correctable conditions that cause slow learning.

Establish classes in adult education for adults and older youth. Be particularly concerned to meet the needs of those who have not completed eight years of school.

A Nation-wide campaign for literacy education has had the cooperation of the Office of Education for several years. Recent issues of *School Life* (Reference No. 5) have called attention to the problem of illiteracy and its relationship to manpower and the national welfare. Concrete and detailed suggestions for literacy education have been made in those articles. They will serve to amplify the suggestions immediately preceding.

These two jobs of better health and basic education warrant immediate action. Every school and community will undoubtedly appraise these suggestions in light of their present programs. This is not to suggest a high-powered campaign that will soon fade out. It is rather asking that a well-planned and long-range program be developed to deal with these fundamental problems with all the force and vigor that can be mustered, and with full use of all resources available. Good health and basic education are necessary for realization of all the other hopes that we hold for American democracy.

New Books and Pamphlets

Susan O. Futterer, Associate Librarian, Federal Security Agency Library

(Books and pamphlets listed should be ordered from the publishers.)

The Boy Scout Encyclopedia. Text and Illustrations Prepared Under the Direction of the Boy Scouts of America. By Bruce Grant. New York, Rand McNally & Co., 1952. 160 p. Illus. \$2.75.

Educational Planning by Neighborhoods in Centralized Districts; A Report of The Origins, Evolution and Possibilities of an Experiment of the People of New York State in Creating a New Form of Rural Government Through Public Education. By Paul L. Essert and Robert West Howard. Sponsored by The New York State Central School Boards Committee for Educational Research and the Institute of Adult Education, Teachers College, Columbia University. New York, Bureau of Publications, Teachers College, Columbia University, 1952. 132 p. \$2.25.

Elements of Organized Debate and Dis-

cussion. By George Eric Peabody and Edward H. Sargent, Jr. New York, State College of Agriculture, State University of New York at Cornell University, 1952. 34 p. (Cornell Extension Bulletin 854)

Foreign Children's Books Available in the United States. New York, Printed by The New York Public Library for the Children's Library Association, American Library Association, 1952. 30 p.

Fun With Mathematics (Collection of Mathematical Puzzles, Games, Tricks, and Curiosities). By Jerome S. Meyer. New York, The World Publishing Co., 1952. 175 p. Illus. \$2.75.

Geography and Conservation Education. Bloomington, Ind., National Council of Geography Teachers, 1952. 34 p. (Professional Paper No. 13) 50¢. (Address: Ina C. Roberts, Secretary, National Coun-

cil of Geography Teachers, State Teachers College, Valley City, North Dak.)

Guidance in a Rural Community. Green Sea—A South Carolina School District Plans With and For Its Boys and Girls. By Amber Arthun Warburton. Alliance for Guidance of Rural Youth with the Cooperation of The Department of Rural Education. Washington, D. C., National Education Association of the United States, 1952. 156 p. Illus. \$2.00.

Problems and Issues in Public School Finance; An Analysis and Summary of Significant Research and Experience. By a Committee of the National Conference of Professors of Educational Administration. Edited by R. L. Johns and E. L. Morphet. New York, Bureau of Publications, Teachers College, Columbia University, 1952. 492 p. \$4.50.

Selected Theses on Education

Susan O. Futterer, Associate Librarian, Federal Security Agency Library

THESE THESES are on file in the Federal Security Agency Library, where they are available for interlibrary loan.

A Survey of Requirements in Foreign Language for Matriculation at Colleges and Universities Throughout the United States. By Anne Holden Braden. Master's, 1950. University of Michigan. 119 p. ms.

An Historical Development of Present-Day Problems of Muskingum College. By John Harold Bright. Doctor's, 1950. University of Cincinnati. 236 p. ms.

A Study of Candidates for the Doctor's Degree in Education at the George Washington University, 1927-1946. By Raymond Brown. Master's, 1948. George Washington University. 52 p. ms.

The History of the Palmer Elementary Schools From 1851 to 1951. By Dorothy Marie Burns. Master's, 1951. Boston University. 85 p. ms.

Motivation Factors in the Selection of Special Education as a Profession. By Elton S. Carter. Master's, 1947. Indiana State Teachers College, Terre Haute, Ind. 105 p. ms.

The Function of the Academic Dean in American Catholic Higher Education. By

Rev. Darrell F. X. Finnegan. Doctor's, 1950. Catholic University of America, Washington, D. C., Catholic University of America Press, 1951. 120 p. (Educational Research Monographs, vol. 16, no. 1)

A Survey of Vocational Guidance Services for Business Students in Private and State Colleges for Negroes. By Wilhelmina Jaudon Gilbert. Master's, 1951. Boston University. 106 p. ms.

Religious Beliefs and Social Values of Syracuse University Freshmen and Seniors, 1950. By Roy M. Hall. Doctor's, 1951. Syracuse University. 191 p. ms.

An Analysis of the Utley Lipreading Test. By Raymond E. Kataja. Master's, 1950. Syracuse University. 63 p. ms.

Student Participation in Student Councils in the Secondary Schools of Massachusetts. By John I. McLaughlin. Master's, 1950. Boston University. 60 p. ms.

A Study of the Cooperative-Training Programs in Retail Selling in the High Schools of the Middle Atlantic States and Washington, D. C. By Gertrude E. O'Donnell. Master's, 1951. Boston University. 97 p. ms.

A Study of Teacher In-Service Education in South Texas. By Lois B. Rhea. Texas College of Arts and Industries, Kingsville, Texas. 38 p. ms.

Study of the Undergraduate preparation of Potential Teachers of Secondary School English in Selected New England Colleges. By Evelyn Rose Robinson. Master's, 1951. Boston University. 151 p. ms.

Test Patterns in Intelligence: Comparative Factor Analyses for High School Boys and Girls. By Rev. Humphrey A. Ruszel. Doctor's, 1951. Catholic University of America, Washington, D. C., Catholic University of America Press, 1952. 70 p. (Educational Research Monographs, vol. 16, no. 5).

Five Year National Survey of State Championship Basketball Teams. By John E. Sipos. Master's, 1949. New York University. 52 p. ms.

A Study of Clothing and Appearance Problems in Relation to Some Aspects of Personality and Some Cultural Pattern in a Group of College Freshman Girls. By Dorothy L. Stepat. Doctor's, 1949. New York University. 132 p. ms.